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CENTRAL NURSERIES



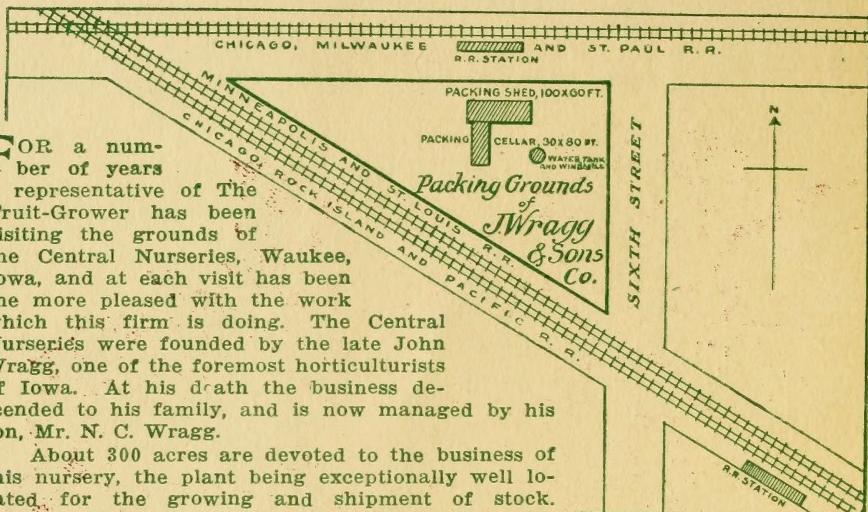
Established
1878

Ornamental
and Fruit Trees
Shrubs, Roses, Etc.

J. WRAGG & SONS CO.
WAUKEE, IOWA.

J. WRAGG & SONS CO.

WAUKEE, IOWA



FOR a number of years a representative of The Fruit-Grower has been visiting the grounds of the Central Nurseries, Waukeee, Iowa, and at each visit has been the more pleased with the work which this firm is doing. The Central Nurseries were founded by the late John Wragg, one of the foremost horticulturists of Iowa. At his death the business descended to his family, and is now managed by his son, Mr. N. C. Wragg.

About 300 acres are devoted to the business of this nursery, the plant being exceptionally well located for the growing and shipment of stock. Through the years this firm has built up a splendid reputation for the character of its stock and its treatment of customers. With the development of the fruit industry of the Middle West the business has been expanded, until today few firms occupy such an enviable position.

The trial grounds of this firm have been of incalculable value to tree-planters of Iowa and neighboring states, for here have been tested all kinds of fruits and ornamental plants, and here can be found a splendid collection of evergreens of all kinds. The Fruit-Grower is glad to know that this nursery and its good work has been appreciated by the general public, and that its business has shown a steady growth. A splendid line of stock has been grown for the coming season, and everything is in the best of condition.—Western Fruit-Grower.

UNEQUALLED LOCATION

Our location is one of the best that could be chosen for a nursery in the Northwest. We are not far from the great railroad center, Des Moines, and are at the junction of the C., M. & St. P. and M. & St. L. railroads. Note the plan of our shipping department above, how conveniently we are located. Our shipping facilities make it possible to pack and ship orders at short notice.

HARDY STOCK

Our shipping facilities are not the only advantage we have, as the soil of this location has proven to be of such quality as to produce as hardy and healthy trees as that in any section of the Northwest. It grows a solid wood and fibrous roots in abundance, and our stock is giving the best of satisfaction in the Northwest and even in the Canadian possessions.

AN OLD EXPERIMENT STATION

We have enjoyed an advantage over many by having one of the State Experiment Stations located at our nursery for many years. It has given us the advantage of testing varieties and finding out what was worthy of propagation and would give the planter good returns for their money.

ORDER SHEET

—PLEASE USE THIS SHEET IN ORDERING TREES, SHRUBS AND PLANTS

J. WRAGG & SONS CO.

WAUKEE, IOWA

Long Distance Telephone Office

Please forward by _____

State whether wanted by Mail, Freight or Express.

Exp. or Frgt. Office

Name

Post Office

County _____ *State* _____

R. R. or Exp. Line

Amount enclosed:

Post Office Order - \$

Express Money Order - \$

Bank Draft - - - \$

Cash - - - - - \$.....

Stamps - - - - \$ _____

Total - - - \$

Date _____

VERY IMPORTANT—Always write your Name and Address very plainly; by so doing you will save us much trouble, and save the possibility of delay and mistakes in filling your order. All remittances, if practical, should be made by P. O. or Express Order or Bank Draft. We will not be responsible for money lost if sent in ordinary letter. We cannot accept private checks unless allowance is made sufficient to cover cost of exchange. One and two-cent stamps accepted in sums of \$1 or less.

Please insert here the names and addresses of those whom you know to be interested in Trees and Plants of all kinds.

We always have some surplus stock left, and if patrons will enclose money for this they will receive the best at much reduced rate. Make note of what you would like to have and we will try to accommodate you.

ANNOUNCEMENT

We, as the old, original firm, are forced to publish the following contract so as to avoid having our old customers misled and for the benefit of our new patrons.

The office of the J. Wragg & Sons Company is located at Waukeee, and we are not connected in any way with any other company.

Waukeee, Iowa, June 7, 1904.

Know All Men By These Presents:

That M. J. Wragg has this day sold and transferred unto N. C. Wragg all his stock now owned by him in the J. Wragg & Sons. Co. Nursery at Waukeee, Iowa, and in so doing he also sells with it his good will and guarantees by the signing of this contract, that the said M. J. Wragg will not engage in the Nursery business in any manner whatsoever in the vicinity of Waukeee, Iowa, either by himself or in company with others, without the written consent of the J. Wragg & Sons Nursery Co. The above stocks are transferred to the said N. C. Wragg by the said M. J. Wragg for the purpose of reimbursing the said N. C. Wragg for all claims against the said M. J. Wragg for certain equities in contracts and other profits in the business of which the said N. C. Wragg has not received his just share.

Signed this 7th day of June, 1904.

M. J. WRAGG.

N. C. WRAGG.

In presence of

Notary Seal.

Jas. R. Whinery,
W. S. Monger.

It will appear from the foregoing that on June 7, 1904, M. J. Wragg sold all his interest in the old J. Wragg & Sons Company and withdrew therefrom, and since that date he has had no connection therewith whatsoever, and has not received the written consent of the company to enter again into business in this vicinity.

J. WRAGG & SONS CO.

TO OUR PATRONS

Over a quarter of a century the J. Wragg & Sons Company have maintained the reputation as one of the largest and best of all similar institutions in the West. Our success is the result of the patronage and good words of our friends. We appreciate the favors shown us in the past and wish to assure you one and all, old friends as well as new, that our intention in the future is to be worthy of your patronage. We are in the best position we have ever been to handle our business promptly and in such manner as to please our customers.

REFERENCES.

As a guarantee of our standing in the horticultural and business interests of this part of the West, we refer to Hon. J. A. T. Hull, Des Moines, Iowa; A. C. Miller, Cashier Home Savings Bank, Des Moines; R. G. Dun & Co. Mercantile Agency; Bradstreet's Mercantile Agency; J. C. Simpson, Secretary Department of Agriculture, Des Moines; H. M. Whinney, Cashier Century Savings Bank, Des Moines; James R. Whinney, Cashier Waukeee Savings Bank.

OUR METHODS AND GUARANTEE.

Varieties true to name, vigorous, well-matured stock, packed carefully and delivered on board cars but a few feet from our packing ground, should be a reasonable guarantee against loss. We use great care to have all trees, etc., labeled true to name, but mistakes may occur, and upon proper proof in such cases, the trees and plants will be replaced free of charge, and it is mutually agreed that this guarantee of genuineness shall not make us liable for a sum greater than originally paid by the purchaser for the trees and plants that prove untrue to name or for damages. Should stock be injured by the elements over which we have no control, before the shipping season, all orders are to be void at the option of this company, and will be accepted only on these conditions.

BRIEF HINTS TO PLANTERS.

PLANTING, ETC.—First, take care of roots; they are the life of the tree. Second, choose good, dry ground—a north or west exposure is best—and prepare thoroughly. Plant at least 16 feet north and south (so top of each tree will soon shade trunk of tree north of it) and 24 feet east and west. Dig large and deep holes, put in surface soil. If ground is flat, plant shallow and ridge toward trees each year in plowing; if high and exposed, plant 6 inches deeper than in nursery; fill about roots with fresh soil until holes are three-fourths full, leaning trees a little to the southwest; put in half a bucket of water, fill holes and tramp lightly; add a little more soil and mulch with old straw or litter 6 inches deep and for 3 feet about each tree (and smaller things in proportion); then with a sharp knife reduce the top of fruit trees about half, cutting out entirely all weak shoots and shortening others, to give the leader a good start. Evergreens are always in leaf, and must therefore be handled with extra care. Handle and plant like other trees, except that the roots must positively not be exposed to sun or air. Don't water oftener than once a week in the driest weather, and then give plenty of it.

When trees are received in fall, open all bundles, dip roots in thin mud, and bury it in a pit of dry soil, with roots 2 feet deep and tops even with the surface; work soil well among roots, fill up and mound over top 6 inches deep. After the ground is frozen, put a little manure over the pit. In spring raise trees early and heel in, covering tops with straw to prevent too sudden drying, and plant when ground is warm.

CULTIVATION—Put no small grain in the orchard for the first five years; used some hoed crops—corn is probably best—and leave plenty of room about trees; cultivate well first part of season and leave alone after July 1. If the autumn be dry, mulch trees with rotted manure, not putting the mulch against the trees.

APPLES

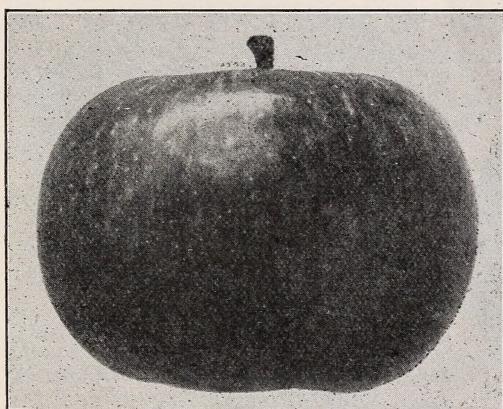
King of fruits. The one fruit that is always in demand and most generally used. They ripen from the first of July until the snow flies and is a fruit that is in its perfection nearly the entire year. Make your selections of the early autumn and winter sorts. Its uses are many and it is Nature's greatest remedy when freely used, in preventing disease. No farm should be without a good orchard. We are growing only such varieties as will give the planter honest returns for his money.

SUMMER

Astrachan—Medium to large, flattened; beautifully marbled with crimson, covered with heavy bloom; hardy; popular variety. July.

Benoni—Medium, red-striped; best of its season; tree hardy, upright, good bearer; blights some. August.

Cole Quince—Large, yellow, ribbed, hardy, productive. August and September. Specially good for cooking where the quince flavor is liked.



Duchess of Oldenburgh.

making it a most profitable market apple.

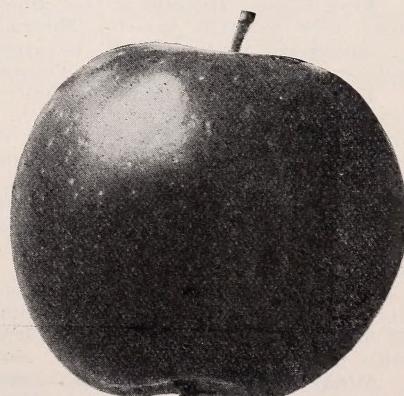
one of the most profitable market fruits. Tree remarkably healthy, vigorous,

Yellow Transparent—Medium, white, changing to lemon-yellow; smooth, waxen surface; of good quality, with crisp flesh; very early, and for an early apple an unusually good keeper. Valuable for market. June.

Duchess of Oldenburgh—Fruit large, striped; beautiful; quite juicy, mild sub-acid or almost tart. Tree vigorous, good bearer, with upright head, requiring little or no pruning. Truly hardy — indispensable north, good south. One of the best for culinary use, being particularly well adapted for cooking and drying. August. (An autumn apple in some localities.)

Early Harvest—Medium size; bright straw color; ripens at wheat harvest and for three weeks afterward. Splendid quality, crisp, tender and juicy.

Red June—Medium size; beautiful color; flesh white, tender and juicy. Early and keeps in good condition a long time.



Red June.

AUTUMN

Dominie (Wells' English Red Streak)—Medium; skin greenish yellow; flesh very tender and pleasant; tree vigorous and prolific. October to December.

Fameuse, or Snow—Medium, striped and blotched with red; flesh remarkably white, very tender and juicy; good bearer. Tree vigorous and hardy. November to February.

Fulton—Rather large, smooth yellow with handsome blush; flesh yellowish white, fine grained and of mild flavor. Early.

Haas (Gros Pommier)—Medium to large, slightly conical and somewhat ribbed; pale greenish yellow, shaded and striped with red; flesh fine, white, sometimes stained; tender, juicy, sub-acid, good. Tree a vigorous, hardy, upright grower, with well-formed head; bears early. September to November.

Longfield—One of the best of the Russian varieties. An early and prolific bearer, and the fruit is most excellent; rich, sprightly sub-acid quality; medium size; yellow, with a decided blush. October.

Utters Red—Medium to large, roundish; whitish red; very good quality; an excellent variety. One of our best fall apples. September and October.

Wealthy—Fruit large; variegated red. Tree a good grower; an early winter apple in Eastern and Northern localities. A native of Minnesota, and one of their hardy sorts. Fine-grained, full of lively sub-acid juice. Begins to bear young.

WINTER

Ben Davis—Large, smooth, often polished, nearly covered with red; sub-acid; one of the most profitable market fruits. Tree remarkably healthy, vigorous, productive and bears early. December to February.

Chisman—A most valuable new Iowa apple, pronounced by many the best winter apple introduced for many years; has been fruited 12 years, and seems perfectly hardy. It is of good size; yellow, with blush cheek; an early bearer, very productive; of excellent quality, tender, juicy, sub-acid; long keeper.



Ben Davis.

crisp, juicy, spicy, sub-acid; core small. A handsome golden yellow apple. Hardy and productive. One of the best for dessert.

Iowa Blush—Medium or less; finest tart flavor. Tree extremely vigorous and hardy; most excellent variety. November to February.

Jonathan—Medium; red, beautiful; best quality; tree slender; early and abundant bearer. November to February.

Kaump—Medium; yellow; quality good; early and constant bearer. Tree vigorous; very desirable at the North.

Mann—Fruit medium to large; roundish oblate, nearly regular; skin deep yellow when fully ripe; flesh yellowish, half firm, half tender; juicy, mild, pleasant sub-acid. The tree grows straight, symmetrical, and makes a large tree in the orchard. It is an early and annual bearer.

McMahon—Large; beautiful, glossy white, with delicate crimson cheek; juicy, lively tart flavor; good for cooking or dessert; hardy and productive. Early winter.

McIntosh Red—Extra hardy. Sour. Red, not striped. An exceedingly valuable, hardy Canada sort. Fruit medium size, roundish, nearly covered with rich red on light yellow skin. Flesh white, fine, very tender, juicy and refreshing, with a peculiar, quince-like flavor. November to February.

Minkler—Medium, round, yellowish red; good quality. Tree very spreading; hardy and desirable. January to May. This is an apple no one should fail to plant largely. It's all right!

Northwest Greening—Originated in Wisconsin and considered one of the most valuable winter varieties for the North and Northwest. Tree is a straight, thrifty, vigorous and healthy grower. One of our hardiest winter apples; an early and continuous bearer. The fruit is large to very large; smooth, yellowish green; very attractive; quality mild, pleasant sub-acid. One of the best late keepers. Considered by many to be the most profitable winter apple to grow in the North and Northwest.

Paragon (Mammoth Black Twig)—A seedling of Winesap, and a great improvement over its parent sort. Fruit large; very deep red; fine-grained, spicy sub-acid, very good. February to June.

Patten's Greening—A Duchess seedling from Northern Iowa. Tree hardy, productive, early bearer. Fruit large and smooth; olive-green, occasionally faintly blushed with dull red. Flavor pleasant, sprightly sub-acid. Superior cooking fruit.

Pewaukee—New. A seedling from Duchess of Oldenburgh. Fruit medium to large, round, obovate, waved; bright

yellow, partially covered with dark red, striped and splashed, covered with a gray bloom and overspread with whitish dots; flesh yellowish white, breaking, juicy; flavor sub-acid, rich, aromatic, spicy; quality good to best. Tree strong growing and very hardy. Valuable north. January to June.

Price's Sweet—A large, greenish yellow, flat-shaped apple, claimed by many to be superior to Talman Sweet. Tree hardy and productive.

Roman Stem—Medium; has rich, pleasant, musky flavor; fine in color—whitish brown, nearly covered with a delicate blush; for dessert. Midwinter.

Northwest Greening.

son on yellow and green; flavor sub-acid, vinous, refreshing. Popular as a market fruit on account of its regular and abundant yield. Blossoms later than other sorts, and thus escaping spring frosts. February to April.

Rome Beauty—Sour; red-striped. Fruit large, roundish, very slightly conical. Mostly covered with bright red on pale yellow ground. Flesh tender, not fine-grained, juicy, of good quality. The large size and beautiful appearance of this new Ohio apple render it popular as an orchard variety. November to February.

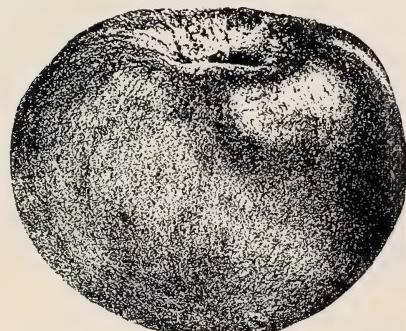
Salome—Extra hardy, sour, red-striped. Keeps until June. Tree very hardy, healthy, vigorous and productive. Bears when young. Fruit medium size, roundish conical; skin pale yellow, striped and shaded light and deep red; flesh whitish yellow, tender, juicy, mild sub-acid, slightly aromatic; good. A long keeper. A valuable new Western apple.

Scott's Winter—Extra hardy; sour; red-striped. Keeps until June. A valuable variety which originated in Vermont, and is hardy in the severest climate; a thrifty grower and a young and profuse bearer. Fruit medium size, roundish; surface deep red and light red in blotches and streaks; flesh yellowish white, slightly reddened near the skin, rather acid and good in quality. Said by Doctor Hoskins, of Newport, Vt., to be his most profitable market apple.

Seevers—Medium to large; greenish yellow, with blush. Best in quality; very productive, hardy. This is one of our choice apples. December to March.

Sheriff (American Beauty)—In appearance much like Jonathan; an early bearer, productive and hardy; very reliable. November to February.

Talman's Sweet—Above medium; whitish yellow, with a soft blush on one side; rather firm, fine-grained, with a rich, sweet flavor. Hardy and productive. November to April.



Walbridge—Medium; striped with red; handsome and of excellent quality; vigorous grower; very hardy; of great value in the North and Northwest. March to June.

Willow Twig—Large, roundish; greenish yellow, striped with dull red; flesh firm, rather coarse, pleasant sub-tart flavor; fine for cooking. Profitable and popular as a long keeper and a market sort.

Wolf River—Large and handsome; round-conical; yellowish, splashed with deep red or crimson; fine for cooking. Tree has proved hardy. Flesh white, tender and juicy. September and October.

York Imperial—Medium to large, irregular, sometimes flattened; greenish yellow, nearly covered with bright red; flesh firm, crisp, juicy, sub-acid and good; vigorous; very productive. One of the best winter apples. November to February.

In addition to the above varieties of apples, we have many others.

CRAB APPLES

The varieties we offer are the hardiest and best for preserving, canning, cider, etc., as well as profitable for market.

General Grant—Extra hardy; red-striped; fruit large, round; yellow, covered with stripes of red, where exposed to the sun turning quite dark. Flesh white, fine-grained, mild sub-acid. Tree a good grower, hardy and productive. October and November.

Hyslop—Red, not striped; fruit large, roundish, ovate, produced in clusters; color dark, rich red, covered with thick blue bloom; flesh inclined to yellow; sub-acid. Tree hardy and vigorous. November.



Hyslop.

Martha—Extra hardy; red and yellow, not striped; a new crab raised from the seed of the Duchess of Oldenburgh by P. M. Gideon, of Minnesota. Mr. Gideon says: "A rapid, stiff grower, a perfect pyramid in form; a great bearer of the most beautiful fruit we ever grew; a bright, glossy yellow, shaded with light, bright red; flavor a mild, clear tart, surpassing all other crabs we ever grew for all culinary purposes, and fair to eat from hand." We regard it as very valuable. October and November.

Souland—Large native crab; green, becoming yellow in the spring, when it is fair eating; very valuable for cooking, as it retains the peculiar flavor of the wild crabs.

Very productive, and keeps well into July; perfectly hardy, and should be more generally planted.

Transcendent—Red-yellow, not striped; fruit medium to large, roundish oblong; golden yellow, with a rich, crimson-red cheek, covered with a delicate white bloom; at ripening the red covers nearly the whole surface. Flesh yellow, crisp, and when fully ripe pleasant and agreeable. Tree perfectly hardy and a young and abundant bearer. September and October.

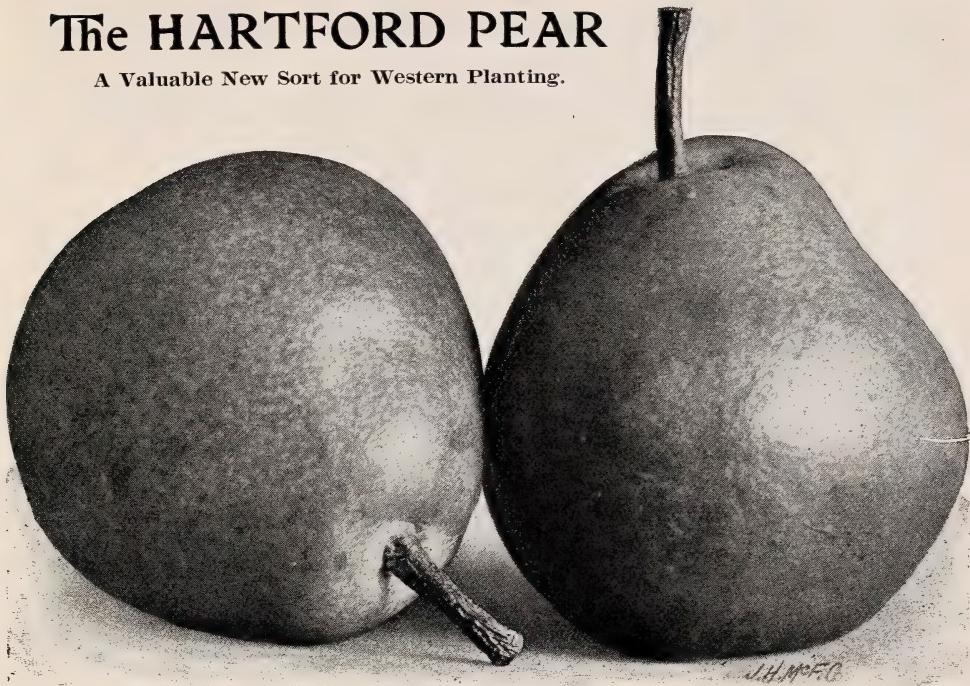
Whitney No. 20—Red-striped. Fruit of medium size; smooth, glossy green, striped and splashed with carmine; flesh firm and juicy, flavor very pleasant. A great bearer and very hardy, as well as a vigorous, handsome grower. Origin, Illinois. August.

PEARS

Every year goes to prove the fact that pear growing in Iowa can be made a success, as well as in a greater portion of the North and Northwest. A careful study of soils and methods of those who make pear growing a success will prove that nearly everyone can make a success in growing this magnificent fruit. We are only offering those varieties that have been proven to be adapted for Iowa and the Northwest.

The HARTFORD PEAR

A Valuable New Sort for Western Planting.



In the Hartford pear we have a variety that is bound to make a sensation wherever grown, for, in all our long experience as nurserymen, we have never come across a fruit of this kind which is so universally adapted to conditions in the West and Northwest. This is not based on hearsay evidence or imagination, but is an actual fact, as the original Hartford tree is still standing and is bearing bountiful crops every year, as can be seen by the following certificate of the owner of the tree.

We have secured the exclusive right to propagate the Hartford, and will place the trees on the market in the fall of 1906, when they will be sent out under seal.

The original tree is standing in the town of Hartford, Iowa, for which we have named it. Its trunk is 6 feet 8 inches in circumference, 30 feet high, and has a spread of 27 feet.

But read what the owner of the tree says:

"Hartford, Iowa, August 20, 1903.

This is to certify that I have known the Hartford pear tree since 1865, and have been sole owner of the premises on which the tree stands for the last fifteen years, and during this time I have picked large crops annually from this tree; at no time has it borne less than ten bushels of pears yearly. Several years during this time I have picked from 18 to 20 bushels, and one year the tree bore at least 25 bushels, from which I sold 22 bushels of marketable fruit, at two dollars per bushel.

(Signed) JAMES RICHARDSON.

The high estimation in which Mr. Richardson is held by his neighbors is sufficient guarantee of the truth of his statement, and we have had personal assurance from many other sources that the Hartford pear tree is the most valuable in his orchard.

Although so old—the seed from which the tree grew was planted in 1848—the tree always has been and is perfectly healthy and shows not a sign of blight. There have been a few trees propagated from it and planted in various parts of Iowa, and wherever grown they have proved to be as regular and profuse bearers as the original tree. The fruit is of medium size, obovate-pyriform in shape, with a beautiful waxy skin, with faint blush toward the sun. In flavor it is rich, del-

icate, melting, buttery and sweet, and is exceedingly juicy. Ripens in September. The illustration is made from a photograph of the fruit and shows its distinctive shape and character.

The supply of Hartford trees will naturally be limited at first, and we will fill orders only in the order in which they are received. It behooves those who wish to plant the very best pear for growing in this section of the country to send in their orders at once, that they may be booked.

GENERAL COLLECTION OF PEARS

Bartlett—Large; buttery, melting, with rich flavor. The beauty, size and excellence of the fruit and productiveness of the tree leave little to be desired and make it very popular. August and September.

Duchesse d'Angouleme—Dwarf. Fruit large, of excellent quality. Tree a strong grower and productive; bears young. Flesh is white, buttery, very juicy.

Flemish Beauty—Large; red-cheeked, beautiful; quality excellent; productive; one of the hardiest; very popular in Iowa.

Kieffer—Large; rich color and good quality. If used before maturity it will be greatly underestimated; but if permitted to hang on the tree until October and then carefully ripened in a cool, dark room, there are few pears better in quality, more juicy or better flavored. Excellent for all uses; keeps until April and May. Vigorous and an early bearer.

Seckel—Small, but of the highest flavor; a standard of excellence; a slow grower, but bears early. Tree hardy, healthy and productive. Late August.

Sheldon—Medium size, or above; roundish oval; skin yellow or greenish russet, with richly shaded cheek; flesh melting, juicy, with a brisk, vinous flavor. September and October.

Wilder Early—Size medium; greenish yellow, with a brownish red cheek; flesh white, fine-grained, melting, excellent.

THE KLONDYKE PLUM

A Golden Yellow Freestone Plum—Earliest of All Americans.

This grand new plum is well named, for it not only suggests Klondyke gold in the rich color of the ripened fruit, but will prove a veritable "Klondyke" to the grower, as its beauty and quality command for it a ready sale at high prices. The tree is a distinct and handsome grower and good bearer. The fruit ripens from July 20 to August 1.

THE DEATON PLUM

A stray variety, that has proved of good quality and great promise. It is of the European type, originated in Polk County, Iowa, and has attracted considerable attention in the neighborhood. The fruit is large, and its color is quite attractive, being a peculiar reddish purple. Profitable; a great bearer; in great demand.

NUMBER OF TREES ON AN ACRE

30 feet apart each way	50	10 feet apart each way	435
25 " "	70	8 " "	680
20 " "	110	6 " "	1,210
18 " "	135	5 " "	1,745
15 " "	205	4 " "	2,725
12 " "	300	3 " "	4,840

RULE—Multiply the distance in feet between the rows by the distance the plants are apart in the rows, and the product will be the number of square feet for each plant or hill; which, divided into the number of square feet in an acre (43,560), will give the number of plants or trees to the acre.

THE STODDARD PLUM

OUR GREAT INTRODUCTION.

The Best, Most Prolific, Handsomest Plum for the Northwest.

The Stoddard is the largest American plum known. At the World's Fair in Chicago, and at the Trans-Mississippi Exposition in Omaha, it took first premium as the largest and finest American plum exhibited. It is a pure American. It

originated in Iowa, and during the twelve years it has been fruiting it has borne annually immense crops of the most beautiful fruit, often measuring 5½ to 9 inches in circumference, and of the very finest quality. In color it is a deep purplish red, with bluish white bloom and numerous dots. Flesh is deep yellow, tender and juicy, with an exquisite, mild sub-acid flavor. The tree is a good, stout grower, beautiful enough for the lawn;

an early bearer, and perfectly hardy. Stoddard was introduced by us in 1890, and we have had good reports from it wherever tested. **We control stock exclusively.**



The Stoddard.

SURPRISE PLUM

This new variety originated in Minnesota. It belongs to the Miner type of plums. Tree thrifty, upright, hardy. For Northern planting said to be one of the very best.

THE TATGE PLUM

Another new plum of the Domestica type that bids fair to rival all others in this class. It is of the Lombard family. Originated in Iowa. A good grower. Comes early into bearing, and is immensely productive.

GENERAL LIST OF PLUMS

The pioneer fruits of Iowa are the plum, wild grapes and wild crab apples, and of these the American plum heads the list. The best varieties have been obtained by careful selection and cultivation, and today they are recognized as the most desirable varieties for Iowa and the Northwest. They are hardy and stand all our climatic changes, and are recognized as one of the most profitable crops. What we offer have been thoroughly tested. Of the Oriental and European types we offer a few, and only such varieties as have proven profitable.

De Soto—Medium size; resembles Miner in form and color, but is two weeks earlier; fine for eating or canning; a moderate grower; bears young and profusely; hardy and very desirable.

Forest Garden—A large, early variety, of good quality; nearly round; mottled red and yellow; sweet and rich; a strong grower. July.

Hawkeye—Very large; dark red, handsome, rich and good. Tree a moderate grower, with broad, shining leaves; hardy and productive.

Lombard—Large; violet-red; flesh yellow, juicy and pleasant. Tree quite vigorous. One of the most widely cultivated plums of America. Has proven a good annual bearer. September.

Miner—Large; red, firm flesh, excellent for canning or cooking; profitable market sort; one of the best if properly fertilized.

Moore's Arctic—Medium; purplish black; juicy and sweet; hardy.



Burbank

Wolf—Large; dark red; good quality; extra fine for cooking and canning by reason of its being a freestone. It is a vigorous grower, entirely hardy, and an abundant annual bearer; one of the very best.

Wyant—Large; round, oblong; purple-red; skin thick; peels readily; flesh firm; free stone, and of an excellent quality. Native of Iowa, and hardy. Downing, etc.

We also have in stock: Hammer, Weaver, Hoskins, Damson, Milton, Charles Downing etc.

Abundance—Large; oblong; showy, bright red fruit, with a heavy bloom; flesh orange-yellow, sweet, juicy. Tree a strong, handsome thrifty grower. Begins to bear young, and annually produces large crops. One of the first varieties imported, and the best known and most popular of the Japan kinds.

Burbank—Grows very large on thinned trees; conical to oblong in form; ground color orange-yellow, thinly overlaid with red and showing many yellow dots; darker red in the sun; altogether a most beautiful plum; flesh yellow, firm, meaty, rich and sugary; ripens three weeks later than Abundance.

Willard—Medium; dark red, bordering on purple; a long keeper; carries to market well; quality fair; extremely early. Tree vigorous and productive.

CHERRIES

The cherry delights in a dry soil, and is naturally a hardy tree, succeeding in the lightest soil or driest situation. A gentle southern slope is desirable—in this respect differing from all our tree fruits. We may all have cherries in abundance if we stick to those varieties which have proved hardy.

Cerise-de-Ostheim—This is a magnificent variety, and has proved to be one of our very best. Hardy, productive and vigorous; classed as a Russian cherry—a fine thing.

Dyehouse—Medium; rich, juicy and of good quality when fully ripe; very productive. Little earlier than Richmond. Hardy.

Early Richmond—Medium; red; fine when well ripened. Tree hardy and productive. One of the best.

English Morello—Large; nearly black; tender, juicy and pleasant, with sub-acid flavor when fully ripe. Tree is a slow grower. Ripens late.

Montmorency—Large; red; acid; larger than Early Richmond, and 10 days later; profitable and valuable.

Windsor—Nearly black; quite firm and rich in flavor; large. Thee vigorous, early and good bearer; probably the most hardy of sweet cherries.

Pool's Pride—Is a fine plum, like Wild Goose, but later; hardy and very prolific.

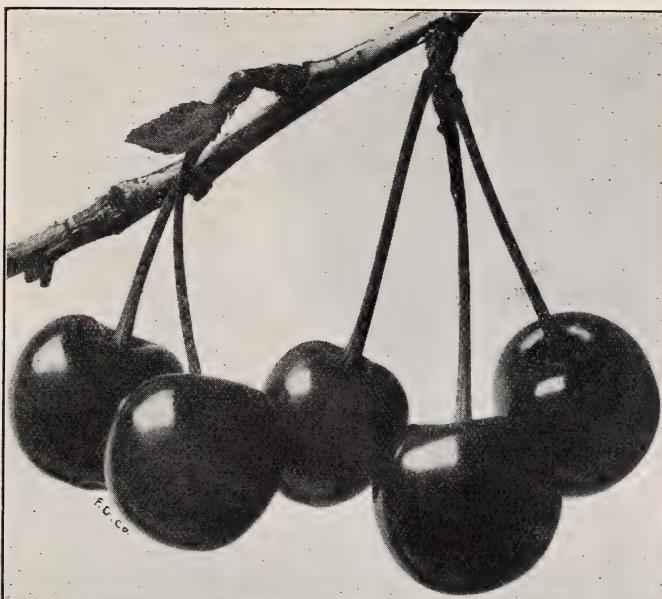
Pottawattamie — Yelowish red; luscious; good, hardy; early and immense bearer. Ripens in July.

Shipper's Pride.. Large; nearly round; dark purple; quite juicy; sweet; splendid shipper and marketer; growth moderate; productive. Originated in Northwestern New York.

Wild Goose — Large; bright red, with purplish bloom; a very good grower; bears early and abundantly; sweet, and of very good quality. Early.

THE WRAGG CHERRY

Our list of cherries is not large, but is large enough to fill the needs of the city lot, the small fruit planter or the large commercial planters, as they are varieties that have been thoroughly tested and tried and yielded an abundance of fruit from the time of the Early Richmond until the late Wragg cherries are gone. The Wragg cherry is our own introduction, and we may well be proud of



it, as it is considered by those who know it to be the best late cherry in cultivation. It is very hardy, and grown on its own roots, it will stand at the northern limit of cherry culture and produce enormous crops. Grafted in the ordinary way, it will stand where any cherry can be grown. Its fruit is extra large and dark, of the Morello type. The old trees are thirty-five years old, and are producing good crops of fruit.

APRICOTS

The apricot, one of the most beautiful and delicious of fruits, ripening just between cherries and peaches, is of great value. Plant the trees in among plums.

Alexander—Russian. An immense bearer. Fruit large, oblong; yellow, flecked with red; sweet and delicious.

Gibb—Russian. Medium; yellow; sub-acid, rich and juicy; the best early sort.

J. L. Budd—A Russian, named for the introducer. Large; white, with red cheek; sweet and juicy; strong grower; good bearer; late.

QUINCES

Champion—Fruit very large, fair and handsome. Tree very handsome, surpassing other varieties in this respect; bears abundantly while young. Flesh cooks as tender as an apple, and without hard spots or cores; flavor delicate, imparting an exquisite quince taste and odor to any fruit with which it is cooked. The most valuable of all.

Meech's Prolific—The most prolific of all known varieties. Ripens between the Orange and the Champion. Bears very early, usually a full crop at three years; quality unsurpassed, and size large.

THE PEACH

Iowa is fast proving herself to be a peach country, and from the annual showing at our State Fair, it is shown that we are getting hardy strains of this magnificent fruit to grow and do well even as far north as the northern limit of the central section of Iowa. We offer only those that are proving the most hardy.

Bailey—This small, hardy, late peach is worthy of a trial by all growers, as it is one of the most satisfactory for this part of the country. It has stood more

adverse conditions than any variety on our grounds, but always gives us a crop of peaches if there are any in the country.

Bokhara No. 3—Large; from August 20 to September 10. Free-stone; compares favorably with many of the Eastern sorts; was introduced from Bokhara, Northern China. Hardy, having stood the test of the last fourteen years in Iowa. Captured first premium at the World's Fair as the largest and best peach for the West.

Champion—A Western peach of very large size and good quality; flesh creamy white, sweet and juicy. A regular bearer; not so hardy as Bokhara. Middle of August.

Crosby—Medium; rich orange-yellow, with blush; free-

stone; pit small; flesh yellow, juicy and sweet. Tree low, spreading; willowy habit of growth; perfectly hardy in a peach country.

Elberta—Large; yellow, with red cheek; of excellent quality; flesh yellow and melting; freestone. September.

Fitzgerald—Of Canadian origin. Large in size; of magnificent quality; very early; a splendid shipper, exceedingly hardy and productive, and a perfect freestone.



Elberta.

GRAPES

The Grape is at home in the West. With our deep soils, bright sun and dry atmosphere, it attains its highest perfection. There is scarcely a yard so small, either in city or country, that room for a dozen or more vines cannot be found, furnishing an abundance for family use.

FAVORITE SORTS

Agawam (Rogers' No. 15)—Large, handsome, fine, dark red berry; very good, vinous and refreshing. Vine very vigorous, strong, healthy grower; abundant bearer of large bunches.

Brighton—Berry medium to large; round; bunch large, well formed; one of the most desirable red grapes; of excelllest flavor and quality; showy for table or market, and commands a good price.

Concord—The grape for the million; large, nearly black; hardy, productive, late.

Delaware—Red; bunch small, compact, sometimes shouldered; berries small, skin thin, but firm; flesh juicy, very sweet and refreshing, of best quality for both table and wine; ripens with Concord or a little before.

Moore's Diamond—A pure native cross between Concord and Iona. A white grape, of dessert quality, with a sweet, sugary taste; healthy, hardy and prolific.

Moore's Early—Another Concord seedling. Large, round, black, with heavy blue bloom; hardy and productive for so early a grape. Ripens two weeks earlier than Concord. Its quality, appearance and earliness make it a very profitable market variety, and it should for that reason be largely planted, especially where the seasons are short.

Niagara—White; bunch medium; berry large; skin thin, but tough; vigorous and healthy; very good variety. Ripens with the Concord.

Pocklington—Concord seedling; called a white grape, but the fruit is a light, golden yellow, clear, juicy and sweet, with little pulp; bunches large; berries round, large, thickly set; quality, when fully ripe, much superior to Concord. The most reliable and generally satisfactory of all white grapes.

Worden—A seedling of Concord. Handsome, early, black, healthy, vigorous and productive, with larger, longer bunches; better in quality, and 10 days earlier than its parent. Has been well tested in Iowa.

MULBERRIES

When we take into consideration the quick growth of the mulberry, its fitness for the lawn, the hedge-row, for wind and snow-breaks, and the abundance of its sweet, berry-like fruit, we consider that it is worthy of more general planting. The fruit, mixed with some other tart kind, is really very good, and if not needed will feed the birds and save the more valuable kinds.

RASPBERRIES

Any ground that will produce a good crop of corn will grow raspberries. Prepare the ground thoroughly. Plant the upright canes in rows 6 feet apart, and confine to a narrow hedge-row. The drooping cane varieties plant in rows 7 feet apart, plants about 2½ feet apart in the row. Set the tips with the crown only about half an inch below the surface, and gradually fill in the furrows as the plants grow, until they stand 3 or 4 inches deep. Many prefer to plant in the fall. We plant in both spring and fall.



The New "Iowa" Raspberry

This new raspberry was discovered near Storm Lake, Iowa, and was named by us the "Iowa," because it seems to us in its sturdy strength and great productiveness worthy the proud name it bears. This raspberry seems perfectly hardy, standing well the extremes of both summer and winter. The plant is rather dwarf, with remarkably strong canes, absolutely thornless and with a rich dark green, heavy leaf. The plants are easily held in hedge-row form and present a

neat, trim appearance. Flowers and green and ripe fruit are found on the plant through an exceptionally long season. The plants commenced bearing very early in the season, having produced the first ripe fruit on our grounds out of nearly twenty varieties, and produced the heaviest crop we ever gathered from the same number of plants. It is a remarkably heavy yielder. The fruit is very large, rich, dark red in color and of excellent quality. Everyone who tested this fruit, with other varieties, pronounced it the best in quality of all the red raspberries. For home use and near markets this variety will easily become the leader on account of its hardiness, wonderful yields and excellent quality. In introducing this variety we are perfectly willing to let it stand on its merits, confident of the success it will achieve and the entire satisfaction it will give the planters. Introduced by us in 1902.

UPRIGHT CANES

Cuthbert—Very large; red; handsome; good quality. Ripens a little late, and continues a long time in fruit. Strong grower, hardy and productive. Good market berry. One of the best of the red-fruited varieties.

Golden Queen—Beautiful, bright golden yellow berries of large size and finest quality. The most popular and best yellow raspberry yet introduced. A very desirable variety for the family garden. Like Cuthbert, it has strong, hardy canes, with large, healthy foliage. It is one of the greatest bearers we ever saw.

Loudon (new)—From Wisconsin. Plants harder and more vigorous than Cuthbert; begins to ripen with the Cuthbert, and continues longer. Berries larger, firmer and of brighter color; clings to the stem and never crumbles. A fine shipper and good market berry; very productive and of fine quality.

DROOPING CANES

Columbian—A new seedling of Cuthbert. In color and fruit it closely resembles Shaffer. Is moderately firm, nearly sweet, a little later than Shaffer, with longer season. Plants, so far as tested, make a strong, vigorous growth.

Cumberland — The largest blackcap raspberry ever known, berries measuring from $\frac{3}{4}$ to 1 inch in diameter, but in spite of this the fruit possesses unusual firmness, and is thus adapted to long-distance shipments. Wonderfully productive, giving fully double the yield of Ohio, producing regularly, and ripening before Gregg. The Cumberland is an unusually strong and vigorous grower.



Gregg—Large; black, covered with heavy bloom; a popular market sort. Canes of strong, vigorous growth. Not strictly hardy in the northern part of this state.

Kansas—Originated in Kansas. There are few, if any, of the blackcap raspberries that impress us more favorably than this. It succeeds wherever tried, and will soon supersede some of the older varieties. For a market berry we believe it has no equal.

Ohio—This berry is one of the most profitable for evaporating on the list at the present time. Of medium size; sweet, good for the table; hardy; of vigorous growth; earlier than Gregg.

Older—Originated in Iowa ten years ago, and has stood all our severest winters well. Coal-black, about as large as Gregg, and five days earlier. A very reliable variety, and productive.

Redfield—Supposed to be a cross between Turner and Mammoth Cluster. The fruit is similar to Shaffer's Colossal in color and shape.

Nemaha—One of the largest blackcap raspberries known; very hardy; a heavy producer; in fact, today recognized where known as the leading blackcap raspberry.

BLACKBERRIES

The culture of these is about the same as that of the raspberry. Give good, rich soil and a little shade among trees, or on the north side of trees or fences, if possible. Set the plants $2\frac{1}{2}$ feet apart in the row, rows 7 feet apart; pinch back the young canes 2 feet from the ground, so they will throw out laterals and grow stocky. Never use sucker plants, but procure good root-grown plants. The last seasons have proved there is as much profit in growing blackberries as any other fruit crop.

Ancient Briton—Large, sweet, of very good quality; little or no core. Ripens about the middle of the season. Productive.

Erie—Large, of good quality; a strong grower; has been fruited a number of years, and is claimed to be hardy, productive, and a very desirable variety.



Lucretia Dewberry.

its value and should be universally planted.

Stone's Hardy—It is a vigorous grower; berry glossy black and of good flavor; a little later than Snyder; claimed to be very hardy.

AWARDS

First Premium and Award of Merit at New Orleans Exposition some twenty years ago.

First Premium and Diploma for largest and best collection of Apples, Plums and Pears at Iowa State Fair, in 1889.

"**Sweepstakes**" for largest and best collection of varieties of fruits adapted to and grown in Iowa at Iowa State Fair, in 1891.

First Premium for Stoddard Plum, as the largest American variety exhibited at the World's Fair, Chicago, in 1893.

First Premium for Largest Collection of American Plums at Iowa State Fair, in 1895, our exhibit at this time containing over forty-five varieties.

Bronze Medal and Diploma for largest exhibit of Apples and Plums from Iowa, at Trans-Mississippi and International Exposition, in 1898. See back cover.

Lucretia Dewberry—This is the finest of its class, one that has proved successful; a strong grower, exceedingly productive. It is really a new trailing blackberry, easily protected in winter and worthy of general planting. Set the plants 2 feet apart in the row, cover in winter with coarse litter, and mulch the plants with it in the spring, thus keeping them off the ground.

Snyder—Medium size, sweet and good; strong grower, very productive; hardy. Has proved

CURRANTS

Currants love a cool, deep soil, and a little shade. Among fruit trees, or along the north side of a fence they will do well. No matter how good the soil, give good cultivation and plenty of manure. The following varieties will give good satisfaction:

Cherry—Large, bright crimson fruits; very acid. One of the largest currants.

Fay's Prolific—This variety is a gross feeder, and requires liberal fertilization. It is healthy, vigorous and very productive; bunches are long, easily picked, and command a high price. Berries are large and hold their size well to the end of the bunch. They are bright red, of good flavor and less acid than some.

Red Dutch—An old favorite; productive and of good quality.

Victoria—Very large, bright red; bunches very long; late; very productive and valuable. This is a standard, good and reliable currant, and will suit everybody.

White Dutch—White; medium size; vigorous grower and good bearer; bunches very compact; early. Fruit requires less sugar than some others; excellent for jellies.

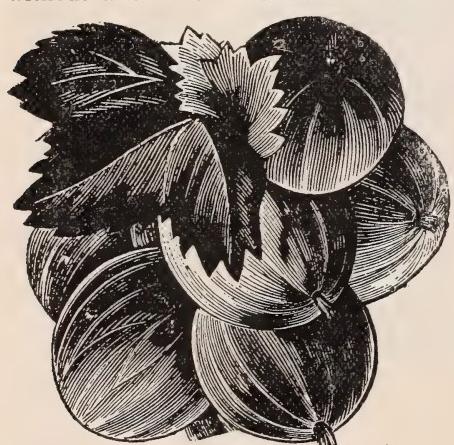
White Grape—Very large white berries. This is the very best table variety of currant known to the grower; sweet or very mild acid; good grower; hardy; perfectly satisfactory for any purposes.



Victoria,
Currants and

GOOSEBERRIES

The gooseberry delights in a deep, exceedingly rich soil, in partial shade, as recommended for currants, and in thorough mulching. Who that is acquainted with its different uses, and knows the delights of a good gooseberry pie, would ever again willingly be without this most healthful of fruits?



Downing.

gooseberries have never received the attention they deserve. The markets are scarcely ever fully supplied. Each year the demand is greater, and no one will make a mistake by planting quite liberally of these most healthful, invigorating fruits.

Downing—Fruit very large; flesh whitish green, soft, juicy and good; plant vigorous and prolific. One of the very best.

Houghton—The old, well-known sort; pale red, sweet and good. It is rather small, but a productive, healthy and very reliable gooseberry.

Industry—Very large; dark red, hairy, of delicious quality. In a cool, rich soil, with a northern exposure, it will yield an abundance of large, luscious fruit. It is a little impatient of the hot sun, but under favorable conditions its immense crops and ex-

emption from mildew will repay the attention it requires. Not an ironclad.

Pearl—This very delicious American is a cross between Houghton and one of the large English varieties. It is very hardy, entirely free from mildew; superior in size and quality, more productive than Downing, and is likely to supersede this standard sort.

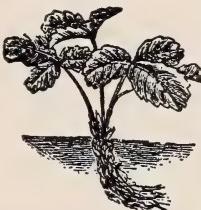
Smith's Seedling—Much like Downing; strong grower; large berry; productive.

STRAWBERRIES

The strawberry has been well styled the queen of fruits. It is the first to ripen and the quickest to come into bearing. Can be successfully grown on a great variety of soils, with very little culture, yet responds readily to kindly location and liberal feeding and culture. The strawberry prefers a cool, moist soil, not sub-



Strawberries properly planted.



Strawberries improperly planted.

ject to injury from drouth; good up-land soil, well enriched, is best. Put the ground in good cultivation, mark off in rows, and set the plants with a spade. Spread the roots out fan-shaped against the square side of the hole, straightened down their full length, so that the crown of the plant is just even with the surface; press down the soil, and give clean culture all through the season. As soon as the ground freezes, much lightly with coarse straw. In the spring rake off

the thickest of it into the paths and leave the balance to work down and remain as a mulch. We list only a few of the best well-tested sorts. Those marked "P" are pistillate, or imperfect-flowering, and must have some variety marked "S" staminate, or perfect-flowering, planted near to fertilize them.

Beder Wood (S.)—Plant very vigorous, hardy, productive; one of the best fertilizers. Fruit large, roundish, bright scarlet, firm and of good quality.

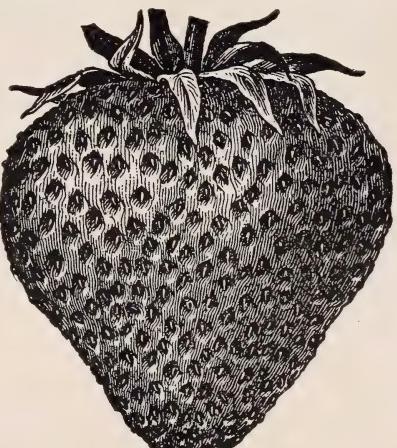
Brandywine—This fine new strawberry has a perfect blossom, and its fruit colors all over. Its season is rather late. It has a large green calyx that adds to the attractiveness of the fruit. The berries are very large, nearly always of regular, conical form; color bright, glossy red; flesh firm and excellent. One of the most promising of the newer berries.

Captain Jack (S.)—Large, roundish; scarlet; flesh firm, of excellent quality; prolific.

Crescent (P.)—Large, conical, bright scarlet; flesh firm, of good quality. Ripens early. Plant vigorous, productive.

Parker Earle (S.)—Healthy, vigorous, productive, with long, penetrating roots; withstands drouths better than some sorts. Glossy scarlet; firm; good shipper.

Warfield (P.)—Vigorous, hardy, enormously productive. Blooms and ripens with Crescent. Fruit large, glossy red, firm, of high quality. One of the very best for market or home use.



Parker Earle.

To the above list of strawberries we add, without descriptions, the following sorts that we are growing and handling: Clyde, Bismarck, Lady Thompson, Marshall, Lovett's Early, Melee, Manwell, Jessie, etc.

RHUBARB

This deserves to be ranked among the best early fruits in the garden. It affords the earliest material for pies and tarts, continues long in use, is valuable for canning. Make soil rich and deep. Use well-grown roots, not divided old clumps.

Linnaeus—Large, early, tender and fine.

Victoria—Very large, long stalks; a great market sort.

ASPARAGUS

Conover's Colossal—Best for general planting.

Palmetto—Newer variety; earlier; probably as good.

HARDY TREES AND SHRUBS

While most people appreciate well-arranged and well-kept grounds, large or small, many fail to realize that they can have equally fine grounds. They have had a few shrubs or roses growing in the thick turf, with no attention given to pruning or cultivating. Under such circumstances good results cannot be expected.

Aside from the pleasure of having fine trees, shrubs, vines and flowers in the grounds surrounding a home, few realize how much these add to the commercial value of the place. A purchaser having to decide between a house with bare and unkempt grounds and one surrounded by fine ornamentals, invariably chooses the latter at a marked advance in price, because he sees that he will at once enjoy what it would otherwise take years to secure. Sagacious men are led by a knowledge of these facts to plant fine trees and shrubs about vacant lots they are intending to put upon the market. Lots thus planted readily secure purchasers at good prices, when bare grounds go begging for buyers.

UPRIGHT DECIDUOUS TREES

Birch, White (*Betula alba*)—A beautiful native tree, common to our woods, particularly in the northern part of the country. Its shining white bark and slender, dark brown branches make it a conspicuous and attractive object. Foliage large and handsome. From the bark of this tree the Indian made his graceful canoe, and hence it is sometimes called the "Canoe Birch."

Catalpa Speciosa—Very large leaves; growth rapid; snowy flowers in July; perfectly hardy in Central Iowa. The timber of this tree is much esteemed for cabinet work.

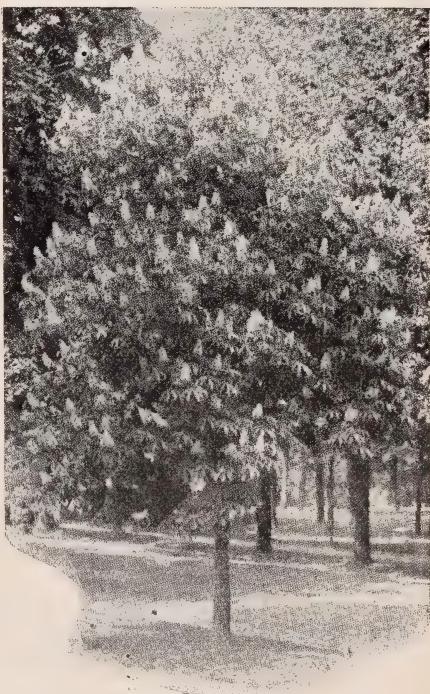
Chestnut, American or Sweet—Well-known, beautiful tree, valuable for fruit, which is highly esteemed, and for timber, which is very useful; should be planted only on thin, dry soils.

Elm, White (*Ulmus Americana*)—A noble spreading and drooping tree of our native forests, peculiarly suitable for avenues and drives.

Linden, American (*Tilia Americana*)—A rapid-growing, large-sized tree, with a remarkably straight trunk, deep green, heart-shaped leaves and clusters of fragrant yellow flowers; will grow almost anywhere. Valuable for its wood, and makes a handsome shade tree.

Mountain Ash, Oak-leaved (*Quercifolia*)—A hardy tree, of fine pyramidal habit. Foliage simple and deeply lobed; bright green above and downy beneath. One of the finest lawn trees.

Horse Chestnut, White-Flowering (*Aesculus Hippocastanum*)—The best known of the horse chestnuts; of handsome, regular form, ultimately reaching a large size. In May it is covered with large spikes of beautiful white flowers, dotted with red and yellow. Fine for park or lawn planted singly; for planting along avenues it is unsurpassed, as it forms a dense overgrowth, and makes cool and most refreshing shade.



Horse Chestnut.

MAPLE

Silver-leaved (*Acer dasycarpum*)—Leaves white underneath; of rapid growth, very ornamental; one of the best street trees we have. We highly recommend it.

Sugar (*A. saccharinum*)—A beautiful, stately tree, of fine form; a desirable shade tree.

Norway (*A. platanoides*)—Of spreading, rounded form; foliage large, dark green; a rich and majestic shade tree.

Ginnala—A dwarf variety of the maple, with cut leaves which assume all the colors of the rainbow in the autumn. It is a small tree for the lawn, very closely allied to the Japan maples.

Poplar, Carolina (*P. Canadensis*)—A vigorous native tree of wonderfully rapid growth, with angular branches and glossy, serrate leaves. This is perhaps the largest of all the native poplars, often attaining a height of 80 feet or more, and makes a park tree of noble proportions; it is also very valuable for street planting, as it is free from attacks of insects, and is not affected by gas. Its quick growth and large size cause it to be planted in considerable numbers.

Sycamore, American (*Platanus occidentalis*)—A very rapid-growing spreading native tree, too well known to need description. A very fine tree for street planting.

Tamarix (*Amurensis*)—This is one of our very finest and hardiest small trees or shrubs. The foliage is light, feathery, graceful, sage-blue in color, and very ornamental. The flowers are small, pink in color, and, like the roses, come first in June, and then all through the summer and autumn.

DECIDUOUS WEEPING TREES

Birch, Cut-leaved (*Betula laciiniata pendula*)—One of the most popular and desirable of all the weeping or pendulous trees. The bark of the tree, on its upright trunk and larger spreading branches, is a beautiful, clean, bright white, or in some cases a little silvery. The smaller branches have a graceful, drooping habit. The leaves are a rich, glossy green, dainty and deeply cut. The tree is a fairly rapid grower when once established, and is perfectly hardy, full-grown specimens standing where the mercury drops 40 degrees below zero. The tall, slender, yet vigorous growth, silvery white bark, small, gracefully drooping branches, with their delicately cut foliage, combine attractive characteristics. Suitable for street, cemetery or lawn. When fully grown, 40 to 50 feet.

Elm, Camperdown Weeping—A vigorous grower, which forms one of the most picturesque drooping trees. Leaves large, dark green and glossy, covering the tree, with a luxuriant mass of verdure; very desirable as an ornamental, and for its shade.

Mulberry, Teas' Weeping Russian—A weeping variety of the now well-known Russian mulberry; perfectly hardy in summer and winter; withstands extreme heat and cold, and grows naturally in a very graceful form.

WILLOWS

Kilmarnock—Grafted 5 to 7 feet high upon Comewell stock, this forms a splendid weeping stock. Very desirable for lawns, gardens, cemeteries and wherever a drooping tree is preferred.

HEDGE PLANTS

For ornamental hedges, we can recommend almost any of the hardy, compact-growing shrubs as being desirable. For screens, we have found nothing so useful as the American arborvitae and Norway hemlock or spruces. With careful pruning, these can be kept low and in good shape; but in planting evergreens care must be used not to let the roots become exposed. For the division of lawns, the Japan quince is very desirable; flowers are large and showy, scarlet-crimson; foliage a glossy green until late in the season. Should be pruned well every fall. For a defensive hedge, for farm purposes and turning stock, we have seen nothing equal to the Osage orange. It is a very vigorous grower, but requires the shears often to keep it in a desirable form. Osage orange should be planted about 6

inches apart; privet or other shrubs, about 12 inches; evergreens, about 12 or 18 inches, according to size.

Arborvitae, American—A rapid grower, and very desirable for an evergreen hedge or ornamental screen. It is not adapted for turning stock, and should be used only for dividing a lawn or hiding unsightly places.

Osage Orange—The popular hedge plant; good stock.

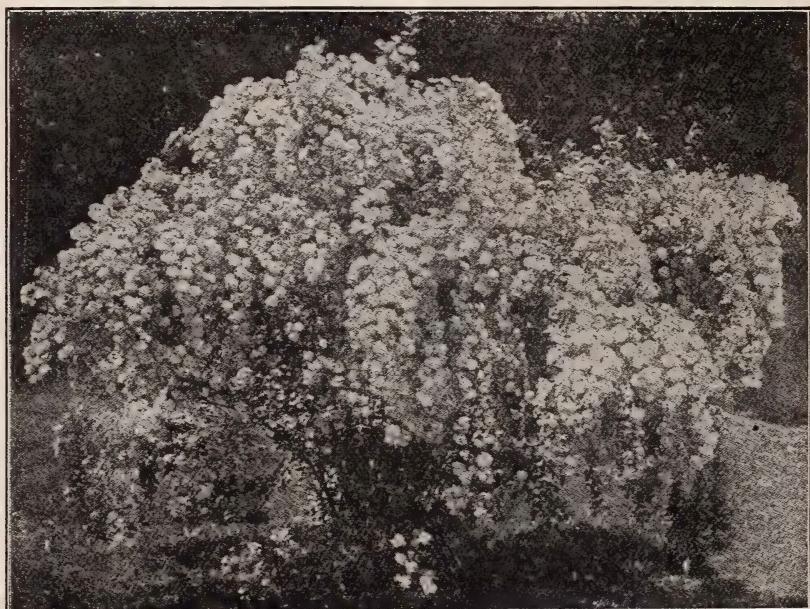
Barberry, Common—Has golden yellow flowers and light green foliage in early spring, and in fall is covered with a profusion of bright red fruits, which remain all winter. The plants are covered with long and strong spines, which make the hedge impervious to the smallest animal.

Barberry, Purple—A variety of the Common barberry, with purple leaves and strong, heavy spines.

Spruce, Norway—See description, pages 33-34.

DECIDUOUS SHRUBS

Our stock of flowering shrubs is very fine—the best we have ever had. The plants are large, of blooming size, and comprise the best of the hardy shrubs and small trees that will give a succession of bloom through the summer months.



Spirea Van Houttei.

Acacia, Rose—This is one of the finest old shrubs in cultivation, perfectly hardy and an absolute blaze of beauty when in bloom.

Almond, White-flowering—This beautiful white-flowering shrub is very desirable and scarce; as hardy as the pink, but does not propagate so readily.

Calycanthus Floridus (Carolina Allspice)—A well-known native bush, bearing very double, purple, fragrant flowers.

Carnagana, or Siberian Pea Tree—Beautiful small tree; flowers yellow. New, and perfectly hardy.

Chionanthus Virginica (White Fringe)—A small native tree, with ash-like leaves and clusters of snow-white eflowers, resembling an elegant fringe.

Deutzia—A very desirable shrub, of strong, hardy growth, bearing an abundance of beautiful racemes of double, pure white flowers.

Honeysuckle, Tree—A fine shrub, loaded with pink flowers in early spring.

Hop Tree, or Shrubby Trefoil (Ptelea trifoliata)—A large shrub or small tree of rapid growth and robust habit. Fruit winged and in clusters. Flowers in July.

Hydrangea Paniculata—Tens of thousands of these noble summer and autumn-flowering shrubs have been sold in the last few years, and the demand is still good. They are absolutely hardy, grow in any soil, and bloom the same year they are set out. They flower abundantly, bearing hundreds of immense panicles of bloom, white turning to rose in autumn. An annual shortening of the branches tends to increase the size of the flowers.

Oleaster (Elaeagnus angustifolia)—We have a few grand specimens in this state, but this shrub should be seen near every home. It forms a small tree, with silvery white foliage and shoots. Flowers small, yellow, inconspicuous, borne in racemes. Very floriferous, and has a very rare and decided fragrance. Even in winter it attracts attention.



Hydrangea, V. G.

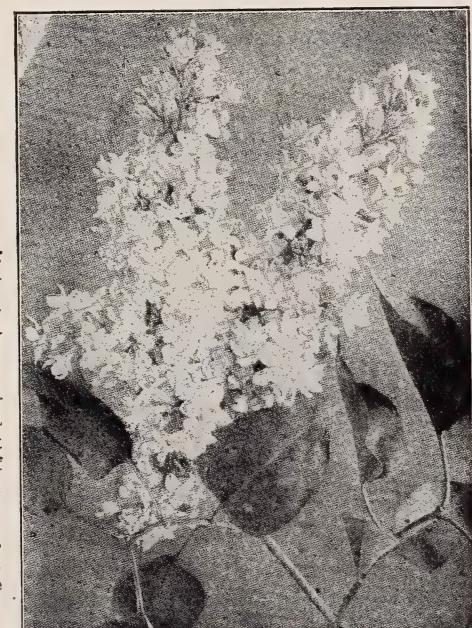
LILACS (*Syringa*)

A class of medium to large-growing shrubs, with bright, attractive, glossy green foliage and a profusion of various colored clusters of delightfully fragrant flowers in May and June.

Japonica (Japanese Tree Lilac)—The largest of the lilacs, making a small tree. Leaves are large, dark green, and the very large panicles of white flowers are produced in June; hardy and desirable.

Josikea—Purple flowers in June, after other lilacs have flowered; broad, dark, shining leaves; tree-like habit; very late-blooming.

Lemoine's Double—Reddish purple, double flowers.



Lilac.

Marie Legraye—Pale white, splendid, large trusses; strong, symmetrical grower; free-blooming. A favorite for forcing.

Persian Lilac—This lilac is of medium size, with small, bright green leaves and large compound panicles of rather brighter flowers than the old-fashioned lilac. The bush is of graceful outline. There are two kinds, one with red flowers, the other with white flowers. In ordering specify as **Lilac, Persian Red**; or **Lilac, Persian White**.

SPIREAS

From this large family we have selected the best sorts. They are perfectly hardy, and the different sorts make a succession of bloom early and late. **Spirea triloba** and **S. callosa alba**, white; **S. Billardii** and **S. salicifolia**, red.

S. Van Houttei—Graceful, with long drooping sprays, studded thickly with handsome, pure white flowers, hence the name "Bridal Wreath." Grandest of all.

HARDY HERBACEOUS FLOWERING PLANTS

The following collection embraces the most desirable varieties. They are all flowers in succession from May to November. They are truly the busy man's of flowers in succession from May to November. They are truly the busy man's flowers, requiring but little time, and for ornamental uses, about the garden and lawns, are entitled to great consideration. This class of plants is benefited by a mulch in winter.

Dicentra spectabilis or Diclytra (Bleeding Heart)—A beautiful, hardy border plant, with brilliant, rosy, heart-shaped flowers, hanging in great profusion from a gracefully curved stem. May and June.

Funkia (Plantain Lily) Caerulea—Blue, broad green leaves.

Funkia Alba—Pure white, lily-shaped, fragrant flowers; borne in large clusters.

Hemerocallis Flava (Yellow Day Lily)—A most useful and desirable herbaceous plant, producing its large, fragrant yellow flowers during July and August in the greatest profusion; the plants grow about 3 feet high.

Hibiscus—Red or pink eye. Large morning-glory-like flowers on tall stalks.

Iris, German—Under this head are included the varieties of several species of iris, all distinguished by their broad leaves, and resembling each other in the shape of their flowers, and for this reason known under one head. All of easiest culture in ordinary garden soil, preferring a rich loam. No garden is complete without the German iris. We sell them in assorted colors.

HERBACEOUS PEONIES

It is surprising that so noble a flower, almost rivaling the rose in brilliancy of color and perfection of bloom, and the rhododendron in stately growth, should be so neglected.

The first point in their favor is hardiness. It may be said of them that they are "hardy as an oak." In the severest climate the plants require no other protection than that which they afford themselves. Then their vigorous habit and healthy growth, freedom from all diseases and insects are important arguments in favor of their cultivation. Growers of roses know well that their flowers are obtained by great vigilance and care. Not so with the peony, which when once planted, all is done. Each succeeding year adds to their size



Festiva Maxima.

and beauty. The foliage is rich and glossy and of a beautiful deep green color, thus rendering the plants very ornamental, even when out of flower. The newer varieties produce very large, handsome, regularly formed cupped blooms resembling large roses. No other flower is so well adapted for large, showy bouquets.

Van Houttei—Dark red; very large and double.

Reevesi—Very full, blush center, encircled by a row of broad pink petals.

Leopold—Bright rose-color, with delightful rose fragrance.

Zenobia—Red; very fine.

Elizabeth—Pink.

La Superba—A beautiful changeable variety, opening blush and pink, but fading to white when fully expanded.

Humei—Very large; a clear, rosy pink; late bloomer, and one of the best and most vigorous.

Festiva—Pure white, with a few crimson streaks in center petals; very fine. A new seedling of our own growing.

Whitleyi—Pure white.

Phlox, Perennial—The flowers of the perennial phlox form immense masses of bloom from the purest white to crimson. Grows 2 feet or more high; hardy.

Rudbeckia, Golden Glow (Corn Flower)—We call attention to this notable novelty, and offer it as the finest hardy herbaceous border plant introduced for many years. It is of easy growth, and is giving complete satisfaction. A plant this season on our grounds, the second year after planting, had 1,380 flowers and buds on it, some of the flowers being $3\frac{1}{2}$ inches in diameter.

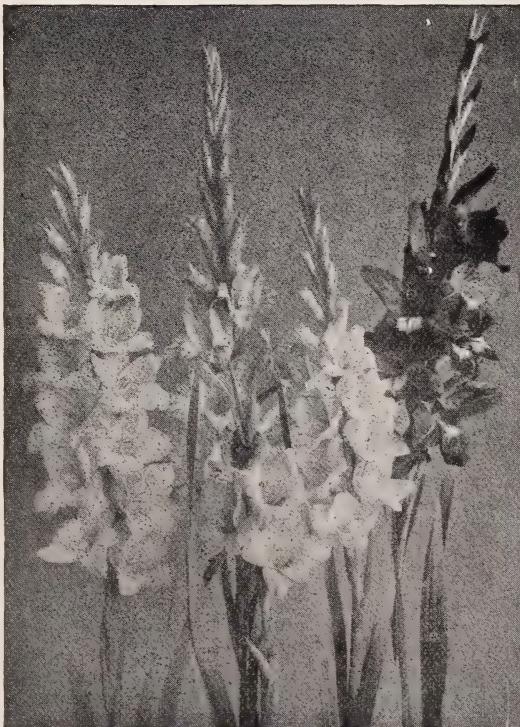
Yucca Filamentosa—This beautiful and interesting plant should be in every collection. Hardy; almost an evergreen; grows in clumps, and when about to bloom throws up a flower-stalk from 3 to 4 feet in height, from which hang 100 to 200 creamy white, bell-shaped flowers. It remains in bloom a long time.

SUMMER FLOWERING BULBS AND ROOTS

GLADIOLI

Gladioli are among the most beautiful and popular summer flowering bulbs. Their culture is very simple, and they will thrive in almost any rich soil, except a stiff clay, but are very susceptible to injury from rank manure. The ground should be well enriched with old manure, that is thoroughly decomposed, which it is better to apply in the autumn.

Plant the bulbs 6 to 9 inches apart, the larger ones 4 and the smaller ones 2 inches deep. Make an early planting as soon as the ground is sufficiently dry and warm, and continue to plant at intervals of two weeks during the spring. In this way a succession of bloom may be had from midsummer until frost. In autumn, before freezing, they should be dug and dried, the earth and old roots removed, and then stored in a cool, dry place, secure from frost until spring.



Gladioli.

CALADIUM ESCULENTUM

One of the most striking foliage plants, either for pot or lawn planting. It will grow in any good garden soil, and is of easy culture. Full-sized plants are 4 to 5 feet high, with immense leaves. Give the bulbs a rich, clayey soil and plenty of water and they will give you striking tropical effects; nothing more decorative can be had for large lawns.

DAHLIAS

Well-known garden flowers, now even more popular than ever. Plant Dahlia tubers in the ground when the season becomes warm, covering the neck some three inches up. If many shoots start, thin them out. After flowering, and before hard frost, take up plants, remove the tops, dry the bulbs a little and put in the cellar until spring, when they can be divided and replanted. Look at them occasionally to see that they are not shriveling from too dry an atmosphere, nor starting the eyes too early in consequence of too much moisture and warmth. Our list includes the best of all the new and standard varieties.

DOUBLE LARGE-FLOWERING SORTS.

Miss Thatcher—Best golden yellow dahlia.

Rudolph Kuhl—Deep maroon.

Claribel—Rosy purple.

Snow Dwarf—A fine white flower.

Glowing Coal—Bright scarlet.

A. D. Livoni—Sea-shell pink.

CLIMBING AND TRAILING PLANTS

A few handsome, graceful vines will give a fine effect to almost any place. For instance, a fine clematis will just fill a place which would otherwise be unoccupied and attract more attention when in bloom than any other plant on the place. Don't omit to include a few vines with your order.

CELASTRUS scandens (Bitter Sweet)—An excellent vigorous twining plant, most attractive when loaded with its orange and scarlet fruit, which hangs on nearly all winter.

CLEMATIS

Clematis plants of the improved sorts are exceedingly hardy, slender-branched, climbing shrubs of marvelously rapid growth and handsome foliage, which produces beautiful large flowers of various colors in great abundance, and during a long period. In its several species and varieties the clematis surpasses all other hardy climbers in adaptation to many uses and locations. As the English "Garden," referring to Jackman's clematises, well says: "They are magnificent, and more than this, they give us some of the grandest things in the way of creepers the horticultural world has ever seen, making glorious ornaments either for walls, verandas, rustic poles or pillars." They are equally well adapted for rock-work, permanent bedding plants, garden or floral ornaments.

Duchess of Edinburgh—Double. This is without doubt the best of the pure whites. Deliciously scented.

Flammula—Highly prized for the fragrance of its small white flowers; leaves dark green.

Gem—Flowers large, about 7 inches in diameter, consisting usually of six petals of a deep lavender or grayish blue, changing to mauve in some stages. Juse to October.

Henryi—New, and one of the best perpetual hybrids, of robust habit and a very free bloomer. The flowers are white, large and very showy. July to October.

Imperatrice Eugenie—Vigorous; flowers of fine form, large, pure white; blooms profusely.

Jackmani—This is perhaps the best known of the newer fine perpetual clematises. The plant is free in growth and an abundant and successful bloomer, producing flowers until frozen up. The flowers are large, of an intense violet-purple, remarkable for velvety richness.

Mrs. James Bateman—New; of great merit; blooms reddish lilac, changing to a pale lavender as they become older.

Paniculata—This valuable native of Japan has, after a thorough trial of several years, proved entirely hardy. The deep, clear green foliage is unusually broad and healthy and remarkably free from all insect enemies. The flowers are pure white, from three-quarters of an inch to an inch in diameter, star-shaped, with a most pleasing and penetrating fragrance. They are borne in heads on stiff stems 4 to 6 inches long, from the axils of the leaves. For any situation where a rapid-growing climber is needed, this will be found a very valuable plant.

Ramona—This new sort is a strong, rampant grower and a true perpetual bloomer; flowers appearing on last year's growth and on the new shoots give an abundance of bloom all through the season. In size they surpass any of the old sorts; often they are 6 or 7 inches in diameter and of the most perfect shape. Color rich deep lavender. Distinct and attractive.

Virginiana—American white clematis. A remarkably rapid-climbing plant, growing to the height of 20 feet, producing an immense profusion of flowers in August. They are creamy white and hang in airy garlands along trellises or surrounding shrubs.

Viticella—Free-growing, with handsome bluish violet flowers. One of the best.

Boston Ivy (Ampelopsis Veitchii)—One of the most satisfactory climbers to grow. Clings to brick and stone walls and soon converts an unsightly building into a thing of beauty.

CINNAMON VINE—This beautiful climber emits from its flowers the delightful odor of cinnamon. Perfectly hardy, the stem dying down every autumn, but growing again so rapidly as to completely cover any trellis or arbor very early in the season.

HONEYSUCKLE

Chinese Twining (Lonicera Japonica)—Holds its foliage nearly all winter; blooms in July and September, and is very sweet.

Monthly Fragrant, or Dutch (L. Belgica)—Blooms all summer; the very best.

Woodbine, Common (L. Periclymena)—A strong, rapid grower; flowers showy; red outside, buff within. June and July.

Scarlet Trumpet (L. sempervirens)—This and its varieties are the handsomest in cultivation. They are strong, rapid growers, and produce scarlet, inodorous flowers all summer.

Yellow Trumpet (L. aurea)—A well-known variety, with yellow flowers.

TRUMPET FLOWER (Bignonia)—Of rapid growth, with large, showy, trumpet-shaped scarlet flowers and pretty foliage. When in full bloom, during August, it produces a most gorgeous effect.

VIRGINIA CREEPER (Ampelopsis quinquefolia)—A native vine of rapid growth, with large, luxuriant foliage, which in the autumn assumes the most gorgeous and magnificent coloring. The blossoms, which are inconspicuous, are succeeded by handsome dark blue berries. The vine is best calculated to take the place in this country of the English ivy, and in summer is really not inferior to it.

WISTARIA Sinensis (Chinese)—A most beautiful climber of rapid growth, producing long, pendulous clusters of pale blue flowers. When well established it makes an enormous growth; it is hardy, and one of the most superb vines ever produced.



Wistaria.

ROSES

Long before history began the rose was loved, as now, for its beauty and fragrance. No home is truly a home without at least a few of these charming plants. Roses love a clayey soil and an open, airy situation, but will do well in any good soil. They well repay good treatment. Feeble, sod-bound plants cannot give free bloom. Mulch well with manure. All roses in this climate are benefited by being laid down and covered in winter.

MOSS ROSES

The moss roses are strong growers and perfectly hardy; they remain in bloom a long time, and are especially prized for their beautiful mossy buds.

Blush Moss—Very mossy; fine buds; free bloomer.

Captain Ingram—Dark velvety purple; foliage small; very handsome.

Comtesse de Murinais—The finest double white moss rose; large, beautifully mossed.

Crested Moss—Deep rose-colored; very fine, handsome buds, surrounded with mossy fringe.

Glory of Mosses—Pale rose, very heavily mossed; one of the best moss roses in cultivation.

Henry Martin—Fine, rosy carmine; free bloomer; bears exquisite buds.

HYBRID PERPETUAL ROSES

These are hybrids or crosses between June and monthly roses, partaking of the hardiness of one parent and the perpetual blooming habit of the other. They are by far the most popular family of roses, needing good soil and culture, as they can bloom only on new shoots of the current season. Cutting off the seed-pods and freely manuring, after the first crop, will insure better blooms later in season.

Capt. Christy—Color a fresh, delicate pink, with deeper shadings in the center of the flower, the whole blossom having a bright, satiny appearance; free bloomer; hardy; the best variety of its color.

Coquette des Alpes—One of the finest pure white hybrid perpetuums; large, full, finely formed flower; pure white, sometimes faintly tinged with pale blush; profuse bloomer.

Coquette des Blanches—Flowers of medium size, in large clusters, full and slightly fragrant; snowy white, sometimes delicately flushed with pale rose.

Eugene Verdier—Crimson-purple; large and full; a very fine, handsome rose.

Fisher Holmes—Like Gen. Jacqueminot, but the flowers are fuller and more freely produced.

Gen. Jacqueminot—This might be called the rose for the million, for it is still a universal favorite. Bright crimson-scarlet, exceedingly rich and velvety. Grown more extensively than any other rose, especially for winter.

Gen. Washington—Color brilliant crimson; very rich and beautiful; large, perfectly double, and a free bloomer.

John Hopper—Bright rose, with carmine center; large and full.

La France—A beautiful pale peach color, more highly flushed at center; equal in delicacy to the Teas, and greatly surpasses them in hardiness. Very large and full, highly perfumed and profuse in blooming.

La Reine—Glossy rose; large, full and very free-flowering.

Mad. Charles Wood—Flowers large; dazzling crimson; a constant bloomer.

Mad. Gabriel Luizet—Pink; very large and fragrant; as an exhibition rose it stands at the head of the list. It has led all other roses in England for five years, and when better known will be a leading variety in this country.



Coquette des Alps.

Mad. Plantier—Pure white; large, very double flower; perfectly hardy; suitable for hedge planting; foliage small; blooms early; is one of the very best white roses.

Magna Charta—A splendid sort; bright, clear pink, flushed with violet-crimson; very sweet; flower extra large, fine form; very double and full; free bloomer.

Pierre Notting—Deep maroon; large, globular form; superb.

Paul Neyron—Flowers of immense size, often 5 inches in diameter. Color deep, clear rose; very fresh and pretty. The plant is a strong, healthy grower, with clean, glossy foliage and one of the most constant and prolific bloomers in the hybrid class; young plants in the nursery rows bloom almost without intermission from June to late October.

Perfection des Blanches—Large, pure white flowers; full and double; constant bloomer; one of the best.

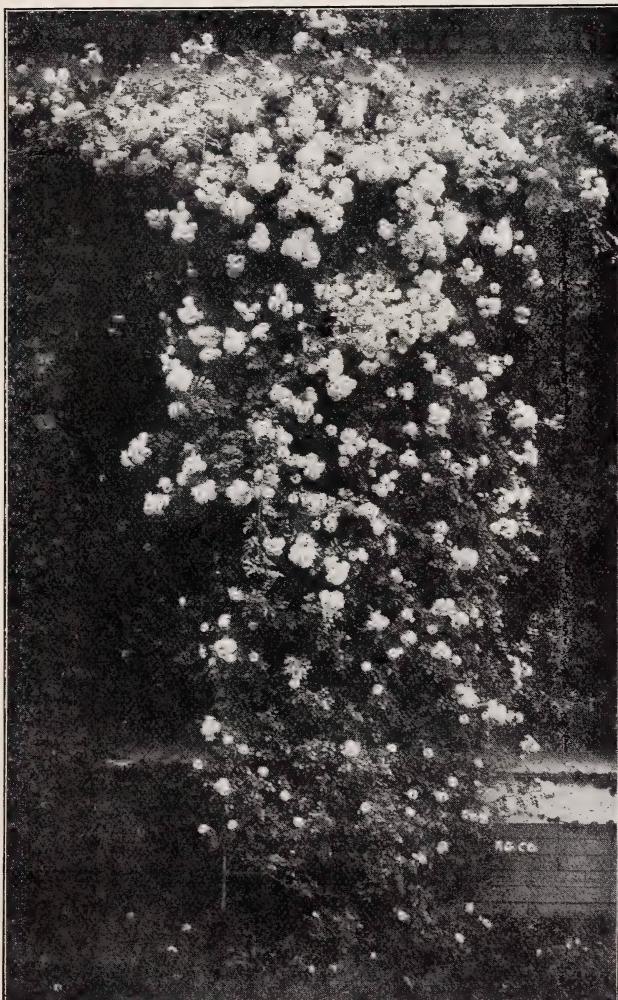
Prince Camille de Rohan—Very dark, rich, velvety crimson, passing to intense maroon shaded black; large, full flowers, looking at a little distance as if really black. One of the darkest roses, very handsome.

CLIMBING ROSES

Nothing can cover an arbor or veranda, or form a beautiful screen for an unsightly object, so charmingly as a climbing rose. Annual flowers require tenfold the care in yearly training and renewing; the climbing rose needs but one planting and increases in beauty as years go by.

Baltimore Belle—Pale blush, shading to rose-color; very double; flowers in beautiful clusters, the whole plant appearing a perfect mass of bloom. One of the best climbing roses, but must be protected in winter.

Crimson Rambler—This wonderful new Japan rose is one of the most important and valuable hardy roses introduced in many years. It is a running or climbing rose, vigorous in growth and entirely hardy. It begins to flower about the middle of June, and remains in bloom a number of weeks. Produces a marvelous abundance of clusters made up of from 20 to 50 brilliant crimson flowers, each flower perfect in shape, from 1 to $1\frac{1}{2}$ inches across. The clusters



Crimson Rambler.

cover the entire length of the bush, making a magnificent appearance against the background of beautiful, glossy foliage. We cannot say too much in praise of this beautiful rose, and our customers will make no mistake in purchasing it. An elegant rose for verandas, walls, pillars and fences.

Greville, or Seven Sisters—Blooms in large clusters, with flowers varying from white to crimson. Luxuriant, dark green foliage; hardy.

Prairie Queen—Clear, bright carmine-pink, sometimes with a white stripe; large, compact, globular; very double and full; blooms in clusters; the best hardy climber in this climate.

EVERGREENS

No one thing, not even a stately mansion, so sets off and adds to the beauty of the landscape as groups and single specimens of well-grown evergreens. No tree is more beautiful or useful for windbreaks and shelter-belts. No forlorn-looking habitation is found, or shivering animals seen, on a farm protected and beautified by this noble class of trees. Such a farm will always sell, and at a price that shows that such things are appreciated. We make a specialty of growing them in large quantities, pack them in moss, and the trees reach our customers fresh and ready to grow. Plant only in spring.

Uses of Evergreens—Aside from the ornamental uses of evergreens, their great values lies in their planting "shelter-belts" about our home grounds and yards. The varieties best adapted for this use are the Norway Spruce, the Scotch Pine and the White Pine. The best results come from planting them in double rows, using spruces for the inside row.

ARBORVITAE

American (*Thuya occidentalis*)—One of the finest evergreens for ornamental screens and hedges. It grows rapidly, and soon forms a most beautiful hedge. It bears trimming, and plants that have been rendered compact by clipping retain the fresh green of the leaves in winter better than those with more open foliage.



Abies Concolor.

Globe (*Globosa*)—A dense, round-growing variety, hardy, very desirable.

Pyramidalis—The most beautiful of the arborvitae, having dark green, compact foliage and remarkably erect form; perfectly hardy.

Siberian (*Sibirica*)—The best genus of the country; exceedingly hardy, keeping color well through the winter; compact and pyramidal; desirable lawn tree.

FIR

Balsam (*Abies balsamea*)—A handsome, compact, erect, pointed tree, with short, soft leaves, which are dark green above, silvery beneath; good grower, and a fine adornment.

Concolor (*Abies concolor*)—A distinct and beautiful species, with yellow bark on the young branches, and unusually long foliage of light green. It certainly has to be seen to appreciate its great beauty. It is the highest and most exquisite of its species.

Douglasii (*Abies Douglasii*, *Pseudotsuga Douglasii*)—A large, conical tree, with smooth bark and lightgreen foliage, silvery beneath; a rapid grower.

JUNIPER

Savin (*Sabina*)—A low, spreading tree, with handsome, dark green foliage; very hardy, suitable for lawns and cemeteries; can be pruned to any desirable shape, and made very ornamental.

Swedish—A small, handsome pyramidal tree; quite hardy, very fine.

Virginian (Red Cedar)—A well known American tree, with deep green foliage; makes a fine ornamental hedge plant.

LARCH, European—The greatest timber tree in Europe, combining rapid growth with great durability, extreme hardness, adaptability to any variety of soil not too wet, and remarkable freedom from disease. It is also very desirable as an ornamental tree, its conical shape, regular, delicate branches and soft, light green leaves make a striking contrast to the different varieties of ornamental trees. Thrives well in Iowa, Minnesota and the Dakotas.

PINES

Scotch Pine (*Pinus sylvestris*)—Is one of the most rapid growers while young; one of the best for shelter planting in the West. It will make the best wind-break in the least time (six to eight years) of any; it is a very valuable species.

White Pine (*Pinus Strobus*)—One of the best evergreens. The foliage is a warm, light green, often with a bluish tinge. The leaves, in fives, are 3 or 4 inches long, soft and delicately fragrant. It does not grow so rapidly the first few years as some, but after being planted eight or ten years it is the most rapid grower of all our evergreens. Its timber value is very high, and large planting of white pine are judicious.

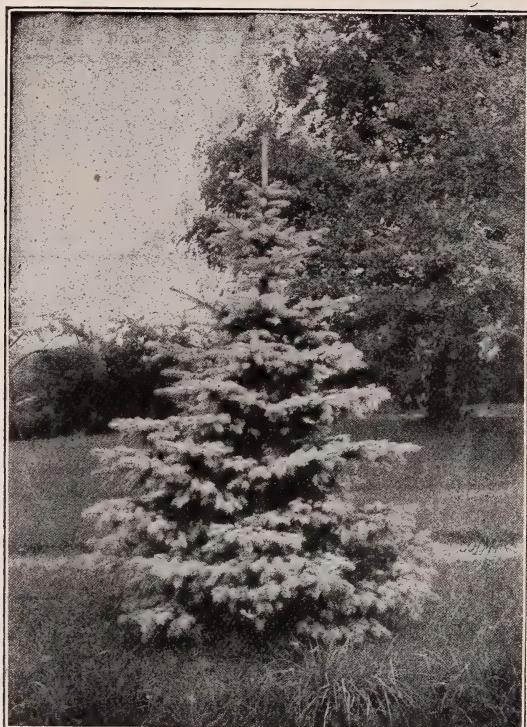


Juniper.

SPRUCE

Black Hills—This is like the *Picea alba* or the White spruce, with the difference that while the Norway and Black and White spruce will not endure the winter drouths of the Western plains, this tree seems well adapted for all the regions from which the others are excluded. Growing in a dry climate and often richly colored, it seems to meet the requirements of a vast field. While the air of the plains has but about 50 degrees of moisture to 90 degrees in the Eastern states, it is necessary to have something which will endure the bright sun and drying winds of winter. For high altitudes and the bleak prairies of Iowa and Dakota, this spruce has no equal.

Colorado Blue (*Picea pungens*)—This is, without doubt, the finest acquisition yet made in our list of evergreens. This is the King of Spruces, clothed in royal robes of silver and sapphire, a very "Kohinoor" among the gems of the Rockies. We would naturally suppose, coming as it does from an altitude of eight to ten thousand feet in the Rockies, that it could not endure sudden changes, or thrive



Colorado Blue Spruce.

popular and largely planted. One of the best evergreens for efficient screens, hedges and windbreaks.

ADVICE

Order early, if long transportation is necessary. Write orders plainly on order blank. State varieties, size and number, and route by which to ship. All orders from unknown parties should be accompanied by cash or reference. For loss of damage to goods in transit, we are not responsible. When selection of varieties is left to us, we select according to our best judgment. In case of any mistake on our part, notice should be given us at once.

We ask the purchaser to read carefully the following pages, and in soliciting your orders, remember our best customers are those who know us best. We have no trade secrets to conceal. Visiting customers are shown any and all features of interest, and we freely answer all questions, for we believe that pleased customers are our best advertisement.

We thank you for past patronage, and solicit your future trade.

We are, for the advancement of horticulture,

**J. WRAGG & SONS COMPANY,
N. C. Wragg, Pres. and Mgr.**

The descriptions in this catalogue are strictly correct.

in a warm climate; yet there are fine specimens of the tree growing in the great parks of Boston, Washington and in the South, and the experience of the last twenty-five years demonstrates its ability to thrive well over all the prairie country of Iowa and the Northwest. The seedlings are variable in color, and must be selected close to get those of silver or sage green foliage, as those with the bluish tint are the valuable ones to plant. The accompanying picture, made from a photograph, will give a faint idea of the beauty of this most beautiful variety of spruce.

Hemlock—An elegant pyramidal tree, with drooping branches and delicate dark foliage, like that of the yew; distinct from all other trees. It is a beautiful lawn tree, and is one of the most useful trees which can be used in the formation of a highly ornamental hedge.

Norway (*Picea excelsa*)—A lofty, elegant tree of perfect pyramidal habit, remarkably elegant and rich as it ages; has fine, graceful and pendulous branches. It is exceedingly picturesque and beautiful. Very

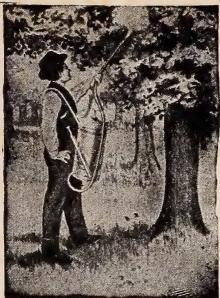
SPRAYING CALANDER

EXPLANATION—While the number of applications recommended will be found desirable in seasons when the fungi are particularly troublesome, a smaller number may often suffice. Those printed in boldface are of most value, and can generally be made with profit. An asterisk (*) cautions against spraying with poisons while the plants are in blossom; two asterisks (**) indicate that there is danger in making an application within 3 weeks of the time the fruit is to be used as food.

PLANTS	1st Application	2nd Application	3rd Application	4th Application
APPLE. Scab, codling moth bud moth, caterpillar, canker worm.	After the blossoms have formed, but before they open, Bordeaux.	within a week after blossoms fall, Bordeaux and Paris Green.	10 to 14 days later, Bordeaux and Paris Green.	10 to 14 days later, Bordeaux.
CHERRY. Rot, aphis, curculio, slug, knot.	As flower buds appear, but before they open, Bordeaux; for aphis use Kerosene Emulsion.	When fruit has set, Bordeaux and Paris Green.*	10 to 14 days later, if signs of rot appear, repeat.	10 to 14 days later, Ammoniacal Carbonate of Copper.
CURRENT. Mildew, worms.	As soon as worms are found on lower and inner leaves, Paris Green.	If they reappear, repeat, adding Bordeaux for mildew.**	If worms still trouble, Pyrethrum or Hellebore.*	After fruit is picked, Bordeaux.
GOOSEBERRY. Mildew, worms.	As leaves open, Bordeaux and Paris Green.	In 10 to 14 days repeat with both.	10 to 14 days later, Sulphide Potash, on English varieties.	10 to 14 days later, repeat.
GRAPE. Fungous diseases, flea beetle.	When first leaves are half-grown, Bordeaux and Paris Green.	As soon as the fruit has set, repeat.*	10 to 14 days later, repeat.	10 to 14 days later, if disease is present, apply Bordeaux.
PEACH. APRICOT. Rot, curculio, leaf curl, mildew.	Before blossoms open, Bordeaux.	Within a week after fruit has set, Bordeaux and Paris Green.*	7 to 12 days later, repeat.	7 to 12 days later, repeat.
PEAR. Leaf blight, scab, psylla, codling moth.	Just before blossoms open, Bordeaux.*	Within a week after blossoms fall, Bordeaux and Paris Green.	8 to 12 days later, repeat.	10 to 16 days later, Bordeaux.
PLUM. Fungous diseases, rot, curculio, knot.	Within a week after blossoms have fallen, repeat.*	10 to 12 days later, repeat.	10 to 20 days later, Bordeaux.	Note — If black knots are found on plum or cherry trees, they should at once be cut out and burned.
QUINCE. Leaf and fruit spots.	When blossom buds appear, but before they open, Bordeaux.	When fruit has set, Bordeaux and Paris Green.*	10 to 12 days later, repeat.	10 to 20 days later, Bordeaux.
BLACKBERRY. RASPBERRY. Anthracnose, rust.	Cut out canes badly diseased with anthracnose and burn. Before buds open, spray with Copper Sulphate solution.	When new canes appear, Bordeaux and Paris Green.**	10 to 14 days later, repeat.**	Note—If red rust appears, the entire stool affected should be grubbed out and burned.
ROSE. Aphis, worms.	Kerosene Emulsion for aphids.	10 days later, Bordeaux and Paris Green.	Afterwards keep lice and caterpillars off by turning a fine stream from hose on under side of leaves.	

KEROSENE EMULSION—Dissolve in 2 quarts of water, 1 quart of soft soap, or $\frac{1}{4}$ pound of hard soap, by heating to the boiling point. Then add 1 pint of kerosene oil and stir violently for from 3 to 5 minutes. This may be done by using a common force pump and putting the end of the hose back into the mixture again. This mixture should be diluted to twice its bulk with water, or about 14 times as much water as kerosene.

BORDEAUX MIXTURE—Six pounds of sulphate of copper are dissolved in 6 gallons of water. In another vessel, 4 pounds of fresh lime are slaked in 6 gallons of water. After the latter solution has cooled, slowly turn it into the other solution and add 10 gallons of water. This, when all is thoroughly mixed and strained, is ready for use. Strain the whitewash through a coarse gunny sack stretched over the head of a barrel.



WHY RIPPLEY'S IS THE BEST Compressed Air Sprayers

They are made of much heavier material and much better and stronger than any other Sprayer on the market. They have a safety valve, and are tested to 60 lbs. pressure.

They will force a finer spray a greater distance than any other Sprayer.

They are made to strap to body, and a person can walk and spray at leisure, by simply turning the pet cock off and on.

They have a better brass cylinder pump. The air being forced in at the bottom, thoroughly agitates the solution; and after air is pumped in according to directions, no more labor is required, except holding the nozzle. More air can be pumped in without taking sprayer from body.

They are the only Compressed Air Sprayers that will whitewash buildings successfully.

We sell them under a guarantee to be as represented, or make good our guarantee.

NET PRICE, CASH WITH ORDER.

No. 15—4-gal. Compressed Air Sprayers, complete, galvanized steel	\$5.00
No. 16—4-gal. Compressed Air Sprayers, complete, heavy copper	7.00
No. 17—5-gal. Compressed Air Sprayers, complete, galvanized steel	5.50
No. 18—5-gal. Compressed Air Sprayers, complete, heavy copper	8.00

Extra hose, per foot, 8c. Single Vermorel nozzle, 75c; double Vermorel nozzle, \$1.25. Bamboo rod, copper tube through center, to elevate spray in high trees, suitable to attach to these Sprayers, 4-ft., 75c; 5-ft., \$1.00; 8-ft., \$1.25; 10-ft., \$1.50.

A complete 4-gallon sprayer includes two feet of hose, strap, and one single Vermorel nozzle, for making fine or coarse spray.

A complete 5-gallon sprayer includes three feet of hose, strap, and one single Vermorel spray nozzle, which is fitted with two caps, for making fine or coarse spray.

Spraying Calendar, telling when to spray and what to use, furnished with each sprayer.

Sold under a guarantee to be the strongest and most durable Compressed Air Sprayer on the market, to be as represented and to do all claimed, or we make good the guarantee.

WHAT IT IS GUARANTEED TO DO—To spray solution in the form of a mist, and to force it a greater distance from the nozzle than any other 4 or 5-gallon sprayer on the market.

To spray trees and whitewash buildings 25 feet high or more, by using extension poles to elevate spray.

To spray more vegetables, bushes, trees and plants with less labor and less solution, and to last longer than any other 4 or 5-gallon Compressed Air Sprayer on the market.

WHAT IT IS USED FOR—For spraying trees, almost any height; spraying flowers, potato vines, cotton, tobacco and nursery stock. For spraying Lice Killer and Fly Remover on stock, and liquid disinfectants in vaults and army camps. For whitewashing poultry houses, barns, fences, etc.

TESTED AND ENDORSED BY—Stark Bros. Nursery and Orchards Co., Louisiana, Mo.; Green's Nursery Co., Rochester, N. Y.; Iowa Seed Co., Des Moines, Ia.; Nebraska Seed Co., Omaha, Neb.; Missouri Valley Seed Co., St. Joseph, Mo.; Moore Chemical Co., Kansas City, Mo.; Editor Western Fruit-Grower; Zenner Disinfectant Co., Detroit, Mich.; West Disinfecting Co., New York; Globe Disinfecting Co., San Francisco, Cal., and thousands of fruit-growers, farmers and breeders in the United States and Canada, which proves that they do all and more than claimed.

RIPPLEY'S SPRAYING MIXTURES

A little careful study of the Spraying Calendar will soon enable one to recognize the plant foes he is liable to meet. The Ripley Spraying Mixtures are based on the scientific investigation of practical growers and are in the nature of improvements on the experiments made in recent years by the U. S. Department of Agriculture.

It is essential to know when to spray and what to use, and how to apply the remedy. The Spraying Calendar treats on all fruit trees and plants separately.

It would be useless to spray with kerosene emulsion to repress mildew, to combat currant worms with Bordeaux mixture, or to apply Paris green for an attack of plant lice.

Ripley's Cupro-Cal Mixture is a fungicide to prevent plant disease, such as rot, mildew, blight and rust. Ripley's Vinegar and Copper Compound is a superior insecticide for beetles and worms that eat foliage, while Ripley's Compound Petroleum Mixture kills by contact lice, scale and other insects that pierce the plant and suck the juices.

Ripley's Cupro-Cal Mixture is a concentrated mixture made to be diluted with water, and used to prevent blight, rot, mildew and rust. A superior fungicide. One bottle to 35 to 50 gallons of water. For 5 gallons of solution use one-tenth bottle of Mixture. Per bottle, 40c.

Ripley's Scale Compound is for spraying and washing fruit trees, vines, plants, etc. Does not injure the plant. Of great value against the red scale, black scale and especially the San Jose scale. One can to 50 gallons of water. For 5 gallons of solution use one-tenth of a can. Per can, 40c.

Ripley's Purple Compound for spraying all kinds of fruit trees, plants and vines. Sure death to chinch bugs, canker worms, curculio, potato bugs, etc. Dilute one bottle in 100 gallons of water. For 10 gallons of solution use one-tenth of a bottle. Per bottle, 30c.

Ripley's Compound Petroleum Mixture for spraying and washing vines, plants, fruit trees, field crops and domestic animals. Destroys plant lice, red spiders, scales, mealy bugs, lice on cattle and hogs, ticks on sheep. Dilute one can in 50 gallons of water. For 5 gallons of solution use one tenth of a can. Per bottle, 40c.

Concentrated Vinegar and Copper Compound, one bottle of which is sufficient for 180 gallons of water, is for spraying all kinds of fruit trees, vines and plants. Sure death to the chinch bugs, potato bugs, curculio, canker worms, etc. For 10 gallons of solution use one-twentieth of a bottle of compound. Per bottle, 30c.

Ripley's Tomato-Cab Purple is sure death to the worm that eats the fruit of the tomato and the head of the cabbage. To be diluted with 100 gallons of water. For 10 gallons of solution use one-tenth of a bottle. Per bottle, 30c.

Ripley's Concentrated Copper Solution is a mixture to be diluted with water to prevent scab, codling moth. Dilute one bottle in 20 gallons of water. For 5 gallons of solution use one-fourth of a bottle. Per bottle, 30c.

Ripley's Spraying Mixtures are put up in either cans or bottles.

"Bro. Jonathan" Series of Fruit Books

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